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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/758,087	01/16/2004	Chiao-Ming Wang	BHT-3204-63	5273

7590 01/17/2007
BRUCE H. TROXELL
SUITE 1404
5205 LEESBURG PIKE
FALLS CHURCH, VA 22041

EXAMINER

HAMO, PATRICK

ART UNIT	PAPER NUMBER
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3746

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	01/17/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary

Application No.

10/758,087

Applicant(s)

WANG, CHIAO-MING

Examiner

Patrick Hamo

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 16 January 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-4 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-4 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 16 January 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-4 are rejected under 35 U.S.C. 103(a) as being unpatentable over Paolini et al., 6,554,587 in view of Lai, 6,379,124 and Shiinoki et al., 6,210,132 and further in view of Jühling, 4,648,635.

Paolini teaches a pump that includes a solenoid 16 connected to electronic circuitry that serves as its power source (col. 14, ll. 19-29) driving a diaphragm 14 of flexible material via a plunger 90 fastened to the diaphragm that is polarized to reciprocate back and forth and does not contact the solenoid core (col. 5, l. 2), air intake 20 and outlet 24 sections that feed into the diaphragm via one-way flapper valves 48, 50 coupled to the diaphragm.

However, Paolini does not teach the following taught by Lai: a housing for an inexpensive aquarium pump device (Abstract, ll. 9-12) with an upper shell 16 and a lower shell 15, the shells including corresponding rims in order to be connected to each other and two troughs (fig. 1) and an anchor seat sandwiched between the two, the lower shell having a lower notch and the upper shell having a top notch (fig. 1) for a power supply wire 18.

Also, neither Paolini nor Lia teach the following taught by Shiinoki: a rubber mounting 14 to insulate noise and vibration of a pump or compressor (col. 4, ll. 13-15).

Furthermore, neither Paolini nor Lai nor Shiinoki teach the following taught by Jühling: a bayonet coupling for two hollow cylindrical bodies with a pin 12 inserting into a hollow groove 13 to provide a loose yet resiliently sealed connection (col.1, ll. 9-16).

Therefore it would have been obvious to one having ordinary skill in the art at the time of the invention to have combined Paolini with Lai and Shiinoki and Jühling in order to provide an inexpensive aquarium pump device (Lai, Abstract, ll. 9-12) with noise and vibration reduction (Shiinoki, col. 4, ll. 13-15) and the housing easily removable yet resiliently sealed (Jühling, col. 1, ll. 9-16).

None of the above references teach explicitly a plurality of L-shaped troughs that engage with latch lugs and a pliable pad which has an annular pad ring with a center opening and a circular trough formed on the annular pad ring and a bottom shell which has a lower retaining rim extending downwards from the bottom thereof slightly smaller than the center opening. However, Jühling teaches a bayonet coupling with a pin 12 inserting into a hollow groove 13 with a curvilinear shape. Furthermore, Shiinoki teaches a base 13 installed on a rubber mounting 14 that consists of two legs inserted into the base (fig. 1). Absent persuasive evidence that L-shaped troughs and a lower rim inserted into an annular ring are functionally significant, the limitations above constitute a mere change in shape and fail to patentably distinguish over the prior art. See MPEP §2144.04(4)(b).

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Furthermore, none of the above references teach explicitly a magnetic disc located on the top end of the solenoid, a lower polar plate coupled on the magnetic disc and an upper polar plate corresponding to the lower polar plate and a rubber cap which has a bottom fastening to the lower polar plate. However, Paolini teaches a solenoid 16 driving a diaphragm 14 of flexible material via a plunger 90 fastened to the diaphragm that is polarized to reciprocate back and forth. Because the rearrangement of the solenoid and polar piston would not have modified the operation of the device, the plates constitute a mere rearrangement of parts and fail to patentably distinguish over the prior art. See MPEP §2144.04(6)(c).

Therefore it would have been obvious to one having ordinary skill in the art at the time of the invention to have modified Paolini, Lai, Shiinoki and Jühling to obtain the invention as specified in claims 1-4 because such modifications would have been considered mere changes in shape and rearrangements of parts which fail to patentably distinguish over the prior art.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Patrick Hamo whose telephone number is 571-272-3492. The examiner can normally be reached on M-F 8:30-5.


If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ehud Gartenberg can be reached on 571-272-4828. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

PH

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WILLIAM RODRIGUEZ
PRIMARY EXAMINER

1/6/07